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HONOLULU AUTHORITY for RAPID TRANSPORTATION

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September 14, 2015

The Honorable Kirk Caldwell, Mayor  
City and County of Honolulu  
530 South King Street, Room 300  
Honolulu, Hawaii 96813

and

The Honorable Ernest Y. Martin, Chair  
Honolulu City Council  
530 South King Street, Room 202  
Honolulu, Hawaii 96813

Dear Mayor Caldwell and Chair Martin:

As new board chair, Dan and I wish to provide the City Council, Mayor, and stakeholders an Executive Summary update of the Honolulu Authority for Rapid Transportation's (HART) project progress. Our intent is to provide the report quarterly with respect to construction, rail systems, vehicle manufacturing/delivery/testing, right-of-way issues, budgeting, financing, schedule, projected operating costs, traffic impact mitigation initiatives and address any additional topics that are requested. As a Board, we have elected new committee chairs, and one of our first priorities is to ensure our budgetary numbers and schedules reflect the most current information. Additionally, we wish to ensure the HART team is leveraging "best practices" and lessons learned in project management as we advance from the first into the second and final phase of the project.

HART is pleased to report that as of August 30, 2015, we have reached another important milestone. All major construction contracts for the entire 20-mile project are either under construction, have recently been awarded, or are in procurement. Additionally, we have reached the 75 percent mark in Federal funding in terms of commitments and allocations. We recently met with the regional Federal Transit Administration (FTA) on August 19, 2015, and with the FTA in Washington, D.C. on September 10<sup>th</sup> and are currently preparing a comprehensive budget and updated schedule review as required by the grant agreement. HART's budget review will first be provided to the Board, the City Council and the Mayor prior to being submitted to the FTA. Our target for completion of the budget update is no later than October 15, 2015. The information below will be incorporated into this Review.

Guideway and Operations Center:

As of September 9, 2015, we passed the 4-mile mark in the construction of the West Oahu Farrington Highway (WOFH) guideway which means we have successfully built and inspected 20 percent of the entire guideway. We are also nearing completion of the casting of all the segments required for the 7 miles of the WOFH section. Additionally, we have begun casting segments for the next 3 miles of the route, the Kamehameha Highway Guideway (KHG) section. The first columns for KHG are already being installed.

Good progress continues throughout the first phase of the 10-mile section and importantly, right-of-way access has been secured. We have continued to learn throughout this Phase One process. HART is committed to ensuring that these "lessons learned" are fully integrated into our second phase of the station and guideway construction.

Another critical component of the entire project is the 43-acre, 200,000-plus square foot operations center situated between Waipahu High School and Leeward Community College. The bulk of all major site work has been finished and construction is nearly 80 percent complete with roofs being installed, rail tracks being laid and the first major power transformer being installed. The Rail Operations Center (ROC) is on schedule to be delivered to the rail operators and maintenance employees in the second quarter of 2016.

**Milestone Date:** Delivery of the ROC: **2nd Quarter 2016**

Rail Vehicle Manufacturing:

The purchase, manufacture, and delivery of our 80 rail vehicles is well underway. Car shell design has been completed and the first two train cars have been delivered to Pittsburg, California for final assembly. Our ongoing plant site inspections of train construction have continued to reflect high-quality performance. The manufacturer reports they remain on schedule for the first delivery of vehicles to the ROC by the end of first quarter 2016.

**Milestone Date:** Delivery of the first four-car train: **1st Quarter 2016**

Stations Under Contract/Construction:

The project has a total of 21 stations proposed for the 20 miles of guideway. As discussed below, we have six stations under contract and Notice to Proceed was issued on August 15, 2015, for our first station construction package. A priority will be the completion of the three stations closest to the ROC. This milestone is important to allow HART to begin testing of the operations center in conjunction with a four-car train configuration. Despite the many project challenges and delays, we are on schedule to achieve these two critical milestones within the next 24 months. Additionally, we are on schedule to award the next three-station construction contract by the end of 2015 and all station/guideway packages by mid-year 2016.

**Milestone Date:** Functional four-car trains and track testing on Guideway: **3rd Quarter 2016**

**Milestone Date:** Delivery of the first three stations combined with four-car train testing: **3rd Quarter 2017**

Budget and Schedule:

As stated above, the FTA and our new Board committee chairs have requested a complete review and refresh of all budget numbers and schedules. We also understand these updates will be needed in consideration of the proposed General Excise Tax (GET) extension, which is a vital component to complete the overall project. Again, we expect to have this updated analysis completed and ready for City Council, Administration and the HART board no later than mid-October 2015.

We have already begun an extensive review of one of the most critical elements of the budget process: our contract packaging plans, which include structure, estimated costs, and scheduling. We have invested much time over the last several months in listening to the recommendations from our local construction

community on how to best value engineer the remaining project in terms of maximizing cost efficiencies while maintaining a high quality project. We have utilized several of their suggestions as outlined below and incorporated them into our procurement processes. These adjustments have shown positive impact in both our overall project costing and project quality. These procurement modifications for the second phase include procuring both guideway and stations together as a package versus independently. Also, we are breaking the packages into smaller segments to generate more competition. Additionally, we have chosen a "design-build" (DB) methodology. The use of design-build contracting is a proven contracting methodology and should allow for a more cooperative relationship between the contracting agency (HART) and the construction company to drive maximum savings, foster greater innovation and efficiencies and better management of traffic challenges. All these modifications were generated from the feedback from our local contractors as well as lessons learned in the first phase.

As a result of these changes, the first two station construction packages (6 of the 21 stations) awarded have all come in at or under our new revised budget figures. In fact, the last contract package for three stations came in well under our revised estimates. While this is encouraging news, the project's construction over-budget number, which was provided back in fourth quarter 2014, remains at \$594 million above original cost estimates in our last budget update. Additionally, we continue to estimate a \$100 million shortfall in total GET revenues due to sluggishness in the GET growth rate and \$210 million has been removed from our budget via the elimination of 5307 funding. Based upon our recent actual contract results and actual GET receipts, these cost projections continue to be holding. However, we have approximately 50 percent of the entire project still in the procurement process and final awards will not be completed until 2nd/3rd quarter 2016.

Additionally, phase two construction is entering a more challenging, costly environment including the restricted Honolulu International Airport location and the urban City Center. Our current project remaining cost estimates includes a forecasted assumption of an approximate 30 percent costs escalation of construction for the final second phase. Again, we will not know the final number until actual bids are received. However, if we use a range that includes a 40 percent escalation that would add approximately \$200 million to overall project costs. We shall thoroughly re-examine both our GET growth rate and these construction cost assumption ranges over the next several weeks and incorporate the latest numbers into the October 2015 report.

The strong construction market in Honolulu remains one of the most expensive in the United States and substantially above where costs were only five years ago when our construction budgets were first estimated. We believe that the pace of construction price increases may slow due to the cyclic nature of construction demand, but prices are not likely to decrease in the foreseeable future.

As stated above, a significant element of budgetary controls is to ensure we are employing "best practices" in repackaging of our remaining contracts to ensure the best value is achieved. Our original contract packaging plan included releasing the final 10 miles of the guideway as one single contract and that contract was envisioned to be a design-bid-build procurement. Further, the contract packaging plan for station construction was to be a separate contract using a design-bid-build (DBD) methodology. We learned in the first phase, that this contract planning actually added risks, increased costs and introduced interface challenges when attempting to build the guideway independent of the station construction. Additionally, we have validated that smaller station packages do attract more bidders (especially local contractors) and therefore, more competitive bidding.

We made the determination that a shift in the procurement strategy to DB, even after significant investment has been made in design, is in the project's best interest in terms of overall cost, reduced risk, better traffic management and schedule delivery. The additional design work performed beyond the typical 30 percent-35 percent was an investment of approximately \$65 million, which we believe will greatly benefit the project as outlined below:

1. The investment in a more advanced design allowed us to clearly identify our land needs for column locations and station touch-downs, thereby avoiding potential delays in critical right-of-way acquisitions on a "design-acquire the land-build" scenario. Instead we can present to the design-builder site access to all of the properties necessary for construction activities and final placement of the guideway and stations. The path for our project in these final two sections is very tight and congested. As we learned in phase one, lack of access to right-of-ways of property would have caused significant delays and added costs.
2. One of the key risks identified by contractors during our outreach discussions was utility relocations. The corridor has numerous overhead and underground utilities, much of which is undocumented or inaccurately shown on as-built drawings. By completing the advance designs of the utility relocation and procuring much of this work in advance of the guideway and station construction, a big risk factor has been mitigated.
3. By investing in advance design, it also allowed us to better structure the procurement packages such that we are able to standardize the station design in order to have consistency for ongoing maintenance and operating costs.
4. Advancing our designs should clearly save the contractors both cost and time so they are able to focus on value engineering to improve cost and quality. Each contractor will have a substantial starting place. Contractors will have the advantage to use the advance design to further value engineer to improve efficiencies and costs.
5. In many places within the urban core, third-party private and government landowners place significant restrictions on our guideway and station locations. Since we have clarity on design, HART has or will have fully collaborated with these third parties to determine stations and guideway locations with the least impact to their activities. The designs we will make available to prospective contractors will clearly delineate the locations available to them (without delay of further negotiation). This is critical in such places as the Honolulu International Airport, Honolulu Community College, and Ala Moana Center. Each of these locations must balance ongoing activities with construction along narrow and crowded corridors. Clear design is critical. Our additional design work has removed a significant risk for prospective contractors by completing negotiations with each of the stakeholders. This should lower project costs and risks as we move forward.

Lastly, please note the shift to DB is not a departure from our current contracting practices. All of our initial major contracts (WOFH, KHG, and ROC) are DB not DBB. This methodology has served the project well. We remain confident based upon our lessons learned, local contractor input and conversations with the FTA, that the shift in strategy is warranted.

We have completed the major work of repackaging all remaining contracts including the last station section into a design-build procurement package, which encompasses the final 4-1/2 miles of the guideway and last eight stations including our final station at Ala Moana Center.

The decision to repackage, to shift to a design-build procurement, add new traffic mitigation initiatives, manage bid protests, as well as the 13-month delay due to law suit(s), will add time to our final Milestone

Delivery date. The original full project completion date set over four years ago was the first quarter of 2020. The new final Milestone date including the new repackaging plans and all other delays will more likely move the completion date into 2021. An updated final Milestone Delivery date will also be incorporated into the October 2015 report.

We have also tasked HART staff, within the refresh analysis, to re-examine the cost-benefit and logic of having an interim opening date, which calls for the first phase terminating at the Aloha Stadium station and operating for 12 months with very limited ridership. By modifying the bid packaging to include guideway and stations, we may be able to add the Airport, Pearl Harbor, Lagoon Drive and Middle Street station group into an earlier phase. This option would offer an interim opening with 15 miles of guideway and 13 stations from East Kapolei to Middle Street Station. This configuration would connect our Westside residents to their 35,000-plus jobs at the Airport and Hickam/Pearl Harbor as well as provide these residents access to the City's largest bus hub at Middle Street and offer the convenience of rail service to the Airport. Again, the disposition of this interim opening date will be re-examined in terms of costs, project schedule and a recommendation will be incorporated into the October 2015 report.

#### Debt Financing:

The original financing budget called for HART to borrow up to \$1.9 billion to finance the project, which was to be repaid with Federal funding and GET receipts. Drawdowns on this debt were to have commenced in fiscal year 2014. However, by working closely with the City's Budget and Fiscal Services (BFS), we have been able to revise the debt plan and significantly reduce the overall debt requirements and therefore, reduce the debt exposure. We currently have \$290 million of cash on hand. Based on current HART cash demands of approximately \$50 million per month in construction drawdowns and our quarterly income from Federal and GET receipts, we will not need bond term debt until mid-2016. However, we will make a request to utilize up to 50 percent of the City's \$450 million Commercial Paper line for short-term borrowing purposes by year-end 2015. The revised financial plan calls for HART to utilize up to \$350 million of the new Commercial Paper line over the life of the project. Any drawdowns on this line will be fully secured by GET and Federal receipts repayments. The proposed 5-year GET extension, if approved, would allow us to fully payoff all line and bond debt borrowings.

#### Other Cost Control Initiatives:

In addition to changes in our contract packaging plan, we are examining other cost control measures. The introduction of the HART rail system will substantially increase public transportation service hours on Oahu. The introduction of the rail system is equivalent to adding over 200 new buses into the public transportation system. We are working closely through City's Department of Transportation Services (DTS) to ensure the rail system is fully integrated into the overall public transportation planning and unnecessary duplications are eliminated and the rider experience is seamless.

Additionally, the rail system is already stimulating transit-oriented development along the route that is adding new housing stock, job opportunities and increased tax revenue for the City. Also, as previously announced, we are exploring public-private partnership opportunities. One example is the Pearl Highlands parking garage facility. We have undertaken an analysis to determine the feasibility of a public-private partnership in the development of the parking structure that is connected to this station. We shall continue to update you on the progress of the analysis and of course, any recommended modification would be submitted to the City Council, Administration and FTA for approvals.

Business Interruption Mitigation:

A significant concern for all of us is the impact to traffic along the construction zone. HART's construction activity along the route's very busy roadways and highways has had an adverse impact to both residents and businesses. There continues to be pressure to limit work hours and lane closures due to the impact of traffic, noise, dust, and other construction nuisances. For example, we have rightly chosen to restrict work around events such as graduations and special events. HART continues to seek the correct balance between maintaining schedule/cost controls and minimizing resident/business impact. We have worked closely with the businesses along the rail route to bring attention to their plight, and at the same time, work with our partners at Hawaii State Department of Transportation and the DTS on ways to limit lane restrictions, lane closures, and in particular left turn restrictions. Each of these compromises increases the challenge for contractors to complete their work due to increased inefficiencies and negatively impacts scheduled delivery.

These lessons learned are being incorporated into our new contract procurements. We have learned throughout these months of construction in Waipahu through Aiea what productivity levels are realistically achievable while working in these busy roadways. It is anticipated that these challenges will only increase as we move into the more concentrated urban core with even more narrow work corridors along Dillingham Boulevard, Nimitz Highway and throughout Kakaako. The design-build model will allow us to better tailor works times with our contractor partners that better balance project completion schedules, costs, and traffic impacts.

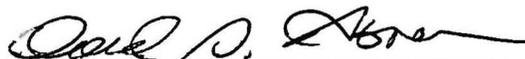
Right-of-Way/Land Acquisitions:

We have secured the bulk of our right-of-way access for the entire 20-mile route. This is a critical accomplishment to avoid costly work-arounds and schedule delays. We have also acquired 73 percent of the square footage of land needed for the entire project. The remainder of the properties to be acquired has been identified and is in various stages of acquisition. Individual recent independent appraisals on each these remaining parcels indicate that our estimated values are in alignment with our current budget allocations for land acquisition. These numbers will again be updated for our October 2015 report.

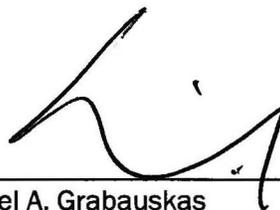
We are hopeful that in the coming months, this Executive Summary report will be of value in keeping stakeholders informed of the project's progress. We are available to discuss any of these updates at the convenience of members of the City Council and/or City Administration.

Mahalo nui loa for your consideration and support in improving the quality of life for our communities.

Sincerely,



Donald G. Horner  
HART Board Chair



Daniel A. Grabauskas  
HART Executive Director and CEO

cc: HART Board of Directors  
All Councilmembers